Purpose:

Addressing hazardous alcohol consumption is a global population health priority. Alcohol misuse is responsible for approximately 3.3 million deaths globally per year, contributing to 5.1% of the global burden of disease and injury. Health effects of alcohol misuse include dependence, liver disease, violence and injury, and increased risk for infectious disease including HIV. The highest prevalence of alcohol misuse is within Europe (7.5% of the population over 15 years of age) and the Americas (6.0% of the population over 15 years of age), both significantly above the international average (4.1%). Alcohol misuse is the third leading cause of preventable death among Americans, and costs the United States approximately 249 billion dollars annually.

In 2010, the sixty-third World Health Assembly endorsed the global strategy to reduce the harmful use of alcohol including supporting initiatives for alcohol misuse screening and brief interventions. To address this significant public health issue, the United States Preventive Services Task Force (USPSTF) recommends universal screening of adults age 18 and over for alcohol misuse and the provision of brief behavioral counseling interventions to reduce hazardous drinking. Screening, Brief Intervention, and Referral to Treatment (SBIRT) is a public health, evidence-based strategy to facilitate alcohol misuse screening and the delivery of a brief intervention applicable to a variety of clinical settings. The International Nurses Society on Addictions (IntNSA), the American Psychiatric Nurses Association (APNA) and the Emergency Nurses Association (NSA) have all officially adopted the position that nurses in all specialties and practice settings should be prepared to deliver SBIRT. International interest in nurse delivered SBIRT is evident based on reports of implementation trials within multiple countries including Australia, Canada, Norway, Poland, South Africa, Sweden, the United Kingdom, and the United States.

However, despite a concerted effort to disseminate SBIRT strategies, and a proliferation of government funded SBIRT trainings programs, the uptake of SBIRT skills into clinical practice remains under-realized. Identified barriers to the delivery of SBIRT in the clinical setting include: lack of training and skill confidence, provider attitudes regarding substance use interventions, and delivery system constraints, primarily time and competing clinical priorities.

The purpose of this multi-phase randomized control study was to: 1) explore the barriers and facilitating factors of skill translation for healthcare learners in the implementation of SBIRT within clinical training; 2) evaluate the effectiveness of a clinical app in improving skill translation of SBIRT among a multidisciplinary sample of clinical learners including nursing, psychology, medicine, and social work.

Methods:

This study was designed based on the Theory of Planned Behavior (TPB) conceptual model. The TPB model assumes that learner behavior is directly influenced by behavioral intent; and behavioral intent is determined by attitudes and behavioral beliefs, subjective norms, and perceived behavioral control. SBIRT attitudes and beliefs include learner perspectives on persons with substance use disorders, the effectiveness of SBIRT, and the applicability of SBIRT to clinical practice. Subjective norms are reflections of the social influences on SBIRT practice including preceptor and patient feedback. Perceived behavioral control includes learner confidence and self-efficacy, as well as factors within the organizational setting that may facilitate or impede SBIRT practice.
In preparation for this study, didactic SBIRT training materials, including online modules, were developed and an original SBIRT app was created by the multidisciplinary SBIRT grant team. In phase I of the study, 22 family nurse practitioner learners were recruited to implement SBIRT, including utilization of the app in the clinical setting over a period of three months. FNP learners received SBIRT didactic training as well as an orientation to the clinical app in preparation for the implementation. Outcome measures for phase I of the study included a weekly SBIRT usage questionnaire, pre and post implementation TPB surveys, a system usability scale (SUS) for the app, and two focus group debriefs at the conclusion of the phase I study experience. Data collection for phase I of this study was conducted between June 2016 and August 2016.

Phase II of the study included the recruitment of 132 healthcare learners from 6 training programs across three academic institutions to implement SBIRT in clinical training. The learners in this study were drawn from the disciplines of nursing, medicine, psychology and social work. All learners received didactic SBIRT training. Half of the learners were randomized to an experimental group using the SBIRT clinical app and the control group received only the didactic SBIRT training. The study was conducted in two cohorts over the course of two semesters, both with a 10 week implementation period. Outcome measurements for phase II of this study included a weekly SBIRT usage questionnaire, pre and post implementation TPB surveys, and a system usability scale (SUS) for the app. Data collection for phase II was conducted between September 2016 and May 2017.

Results:

Pre-post TPB survey scores for phase I of the study demonstrated an increase for each TPB category as well as increased behavioral intent to perform SBIRT over the course of the study (Attitudes/Behavioral Beliefs from 3.99 to 4.35; Subjective Norms 3.37 to 3.75; Perceived Behavioral Control 3.32 to 3.61; and Behavioral Intent 4.27 to 4.37). The System Usability Score (scale 1-100) for the SBIRT app was 65.8, indicating that the app was relatively acceptable for use with some needed improvements that were later made in preparation for the multidisciplinary SBIRT app randomized control trial.

Focus group data identified overall satisfaction with the utilization of an app to support clinical practice however most learners stated that they used the app more frequently as a supplemental resource outside of the patient encounter. Significant barriers to the delivery of SBIRT in the clinical setting were identified. The most significant barriers were lack of clinical preceptor and organizational support for the delivery of SBIRT.

Data analysis for phase II of the study identified statistically significant correlations between TPB concepts and behavioral intent to perform SBIRT. However, a statistically significant difference in SBIRT delivery was not identified between the control group and the experimental group utilizing the SBIRT app.

Conclusion:

There is significant international interest in the multidisciplinary delivery of SBIRT as a mechanism to increase global secondary prevention of hazardous alcohol use. However, mechanisms need to be identified to more effectively translate this evidence-based skill from the classroom to clinical practice. Results from this study suggest that TPB-based healthcare learner training supported by mobile technology may enhance behavioral intent to deliver SBIRT. However, improving global population health outcomes related to alcohol misuse will require nursing leadership within existing healthcare organizations to support the uptake of alcohol use screening and brief interventions in clinical practice.

Title:
Improving Alcohol Use Screening and Brief Intervention: A Multidisciplinary Mobile App Randomized Control Trial
Keywords: 
Alcohol misuse, Clinical app development and SBIRT

References:


Abstract Summary:
This presentation will review the global epidemiology of alcohol misuse and clinical strategies to combat the health consequences of hazardous alcohol misuse including multidisciplinary SBIRT training, and the development, implementation and randomized control trial evaluation of a Screening, Brief Intervention and Referral to Treatment (SBIRT) mobile app.

Content Outline:

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   2. Clinical implications for international nursing practice

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III. Conclusion
1. Next steps for improving population health outcomes related to alcohol misuse
2. Opportunities for global nursing leadership

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